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ELECTRONIC APPARATUS HAVING AN ADHESIVE LAYER FROM WAFER LEVEL PACKAGING

IN THE CLAIMS

Please amend the claims as follows:

1-18. (Canceled)

- 19. (Currently Amended) An electronic system comprising:
 - a processor; and
 - a pre-packaged flip chip coupled to the processor, wherein the flip chip includes:
- a first semiconductor device having a first side and a second side, the first side comprising a first array of connection pads, the connection pads electrically coupled to circuits on the first semiconductor device;

an adhesive layer covering the first side of the first semiconductor device with a first surface of the adhesive layer contacting the first side, the adhesive layer having an array of column-shaped openings substantially aligned with one or more connection pads of the first array of connection pads and having a chamfer, opposite the first surface of the adhesive layer, at each of the column-shaped openings; and

a conductive material substantially filling the array of column-shaped openings.

- 20. (Previously Presented) The electronic system of claim 19, wherein the second side of the first semiconductor device is opposite the first side and includes a protective material substantially covering the second side.
- (Original) The electronic system of claim 19, wherein the adhesive layer is comprised of 21. one or more film layers.
- (Original) The electronic system of claim 19, wherein the adhesive layer includes a 22. curable, fluid material.
- (Original) The electronic system of claim 19, wherein the conductive material is solder. 23.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE

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24. (Original) The electronic system of claim 19, wherein the conductive material is

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cylindrical in shape.

25-50. (Canceled)

51. (Previously Presented) The electronic system of claim 19, wherein the adhesive layer

includes an elastomer.

52. (Previously Presented) The electronic system of claim 19, wherein the adhesive layer

includes a thermoplastic material.

53. (Previously Presented) The electronic system of claim 19, wherein the adhesive layer

includes a thermoset material.

54. (Previously Presented) The electronic system of claim 19, wherein the adhesive layer

includes a pressure-sensitive material.

55. (Previously Presented) The electronic system of claim 20, wherein the protective coating

includes an epoxy.

56. (Previously Presented) The electronic system of claim 19, wherein the conductive

material includes a conductive paste that hardens upon curing.

57. (Previously Presented) The electronic system of claim 19, wherein the conductive

material includes a conductive gel that hardens upon curing.

58. (Previously Presented) The electronic system of claim 19, wherein the conductive

material is column-shaped.

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(Previously Presented) The electronic system of claim 19, wherein the second side of the 59. first semiconductor device includes a bonding layer.

- 60. (Previously Presented) The electronic system of claim 19, wherein the conductive material is flush with a surface of the adhesive layer opposite the first surface of the adhesive layer.
- (Previously Presented) The electronic system of claim 19, wherein the conductive 61. material protrudes beyond a surface of the adhesive layer opposite the first surface of the adhesive layer.
- (New) An electronic system comprising: 62.
 - a processor; and
 - a pre-packaged flip chip coupled to the processor, wherein the flip chip includes:
- a first semiconductor device having a first side and a second side, the first side comprising a first array of connection pads, the connection pads electrically coupled to circuits on the first semiconductor device;

an adhesive layer covering the first side of the first semiconductor device with a first surface of the adhesive layer contacting the first side, the adhesive layer having an array of rectangular openings substantially aligned with one or more connection pads of the first array of connection pads and having a chamfer, opposite the first surface of the adhesive layer, at each of the openings; and

a conductive material filling the array of rectangular openings.

- 63. (New) The electronic system of claim 19, wherein the second side of the first semiconductor device is opposite the first side and includes a protective material substantially covering the second side.
- (New) The electronic system of claim 20, wherein the protective coating includes an 64. epoxy.

65. (New) The electronic system of claim 19, wherein the adhesive layer is comprised of one or more film layers.

- 66. (New) The electronic system of claim 19, wherein the adhesive layer includes a curable, fluid material.
- 67. (New) The electronic system of claim 19, wherein the conductive material is solder.
- 68. (New) The electronic system of claim 19, wherein the adhesive layer includes an elastomer.
- 70. (New) The electronic system of claim 19, wherein the adhesive layer includes a thermoplastic material.
- 71. (New) The electronic system of claim 19, wherein the adhesive layer includes a thermoset material.
- 72. (New) The electronic system of claim 19, wherein the adhesive layer includes a pressure-sensitive material.
- 73. (New) The electronic system of claim 19, wherein the conductive material includes a conductive paste that hardens upon curing.
- 74. (New) The electronic system of claim 19, wherein the conductive material includes a conductive gel that hardens upon curing.
- 75. (New) The electronic system of claim 19, wherein the second side of the first semiconductor device includes a bonding layer.

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(New) An electronic system comprising: 76.

a processor; and

a pre-packaged flip chip coupled to the processor, wherein the flip chip includes:

a first semiconductor device having a first side and a second side, the first side comprising a first array of connection pads, the connection pads electrically coupled to circuits on the first semiconductor device;

an adhesive layer covering the first side of the first semiconductor device, the adhesive layer having an array of rectangular openings substantially aligned with one or more connection pads of the first array of connection pads; and

a conductive material filling the array of rectangular openings.

- (New) The electronic system of claim 19, wherein the second side of the first 77. semiconductor device is opposite the first side and includes a protective material substantially covering the second side.
- (New) The electronic system of claim 77, wherein the protective coating includes an 78. epoxy.
- 79. (New) The electronic system of claim 19, wherein the adhesive layer is comprised of one or more film layers.
- (New) The electronic system of claim 19, wherein the adhesive layer includes a curable, 80. fluid material.
- 81. (New) The electronic system of claim 19, wherein the conductive material is solder.
- 82. (New) The electronic system of claim 19, wherein the adhesive layer includes an elastomer.

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83. (New) The electronic system of claim 19, wherein the adhesive layer includes a thermoplastic material.

- 84. (New) The electronic system of claim 19, wherein the adhesive layer includes a thermoset material.
- 85. (New) The electronic system of claim 19, wherein the adhesive layer includes a pressure-sensitive material.
- 86. (New) The electronic system of claim 19, wherein the conductive material includes a conductive paste that hardens upon curing.
- 87. (New) The electronic system of claim 19, wherein the conductive material includes a conductive gel that hardens upon curing.
- 88. (New) The electronic system of claim 19, wherein the second side of the first semiconductor device includes a bonding layer.